

ABSTRACT OF THE DISCLOSURE

A magnetic recording medium is constructed to include at least one exchange layer structure, and a magnetic layer formed on the exchange layer structure, where the exchange layer structure comprises a ferromagnetic layer, and a non-magnetic coupling layer provided on the ferromagnetic layer and under the magnetic layer. The ferromagnetic layer and the magnetic layer have antiparallel magnetizations. The non-magnetic coupling layer is made of a Ru-M3 alloy, where M3 is an added element or alloy, and a lattice mismatch between the non-magnetic coupling layer and the magnetic layer and the ferromagnetic layer respectively disposed above and below the non-magnetic coupling layer is adjusted to approximately 6% or less by addition of M3.

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